

the *Eginidæ* and *Trachynemidæ*, which present this structure, are rigid.

The contractile tentacles owe their contractility to a muscular layer situated between the cellular axis and the external epithelium. This cellular axis is only a dependence of the internal epithelium which lines the digestive cavity (Hydroids) or the marginal canal (Medusæ). It probably acts as an elastic organ antagonistic to the muscular layer.

The second kind of connective tissue is a substance destitute of cells, which forms the umbrella of all the simple Medusæ, including the gelatinous substance of the natatory bells and covering laminæ of the Siphonophora. Sometimes this substance is entirely homogeneous; sometimes it is traversed by numerous fibres very like the elastic fibres. In an *Æquorea* these fibres are attached to a membrane capable of isolation, placed beneath the epithelium of the convex surface of the umbrella.

The third form is the well-known gelatinous substance with disseminated cells of the umbrella of the higher Medusæ. Professor Kölliker agrees with Professor Virchow in denying the existence of these cells in *Cyanea capillata*.—*Bibl. Univ.* May 1865, *Bull. Scient.* p. 66.

*On a New Type in the Group of Ascidians*—*Chevreulius callensis*.  
By M. LACAZE-DUTHIERS.

After describing the general characteristics of the Ascidia, the author says:—The specimen which forms the subject of the present memoir exhibits an exceptional and very remarkable arrangement, which masks the true characters of the group. All the individuals of the genus *Chevreulius* are without stolons or buds which might lead to their being approximated to the social Ascidia, and still less to the compound forms. Their form is that of a cylinder, free at one extremity, adherent by the other, and slightly flattened on that side which is in contiguity to the foreign body. The free superior extremity presents the characters of the genus.

The test, which is of a yellowish colour and cartilaginous, is sufficiently resistant to retain its form after desiccation; its thickness is not great, and it resembles a thin lamina of pale horn. When it is contracted, the orifices are not visible; but as it becomes distended, more than half of the flat upper extremity of the cylinder is soon seen to detach itself towards the circumference, and to rise by moving as if round a hinge placed on the side of the cylinder which is flattened.

Beneath the plate which rises thus so as to form a right angle with its former position, and which represents a valve, there appears a white transparent tissue—a membrane stretched from one side to the other of the separated parts, so as to fill up the great fissure produced by this sort of gaping. Upon this membrane two mamillæ soon rise, at the summit of which open the two orifices characteristic of the Ascidia. One of these leads into the branchial chamber, and

consequently to the mouth; this is the highest one: the other, less prominent and placed laterally, gives passage to the water which traverses the branchiæ, to the residues of digestion, and to the products of reproduction.

Between these two orifices a small opaque-white nucleus may be distinguished through the tissue, with delicate filaments issuing from it: this is the nervous ganglion.

Thus *Chevreulius* is undoubtedly an Ascidian, but it is a *bivalve* Ascidian, of which the test is divided into two parts moveable upon each other, as in the Acepala; and the Ascidia themselves must be arranged in two series—one for those in which the external envelope is a true little leather bottle with two apertures, the other for those in which the test, divided into two parts by a broad horizontal cleft, becomes bivalve.

Having met with *Chevreulius* for the first time in the waters of Calle, I have named it *C. callensis*. It lives at great depths (60, 80, or 100 fathoms), and belongs to the fauna of the coralligenous zone.

In conclusion, the author remarks upon the interest attaching to the discovery of *Chevreulius*, as an Ascidian with an upper and lower valve, in connexion with the relation existing between the Tunicata and Brachiopoda.—*Comptes Rendus*, June 19, 1865, p. 1264.

*On some singular Organs appended to the Feet of certain Crustacea.*  
By MM. CLAUS and SARS.

Professor Claus (*Zeitschr. wiss. Zool.* xiii. p. 422) and Professor Sars (*Videnskabselskab. Förhandl.* 1863) have independently investigated the Schizopod Crustacea of the family Euphausidæ with regard to the singular organs already alluded to by Dana, Semper, and Kröyer, and regarded by Semper as eyes, and by Kröyer as auditory organs. These are spherical organs, of a reddish colour, situated at the base of several of the thoracic legs and of the first four pairs of abdominal appendages. Both the authors above mentioned have demonstrated the correctness of Semper's view, although, besides these pedal eyes, the animals possess the two large compound eyes common to all Decapoda. Each of the thoracic and abdominal eyes receives a special nerve from the ventral ganglionic chain. The organ itself is a spherical bulb, moved by special muscles; and in it may be distinguished a crystalline lens, a vitreous body, a pigment-layer, and a retina of complex structure. The existence of a crystalline lens distinct from the cornea is very striking, as remarked by M. Sars; for in other Crustacea no true crystalline exists, its function being performed by the thickened and inflated cornea. According to M. Claus, the position of the four pairs of abdominal eyes is very remarkable: the first pair looks forwards, the last pair backwards, and the two intermediate pairs downwards.—*Bibl. Univ.* May 1865, *Bull. Scient.* p. 63.